REMARKS

Status of Claims

Claims 1–4, 6, 9, 24, 26, 29–34, 36, 39, and 40 were pending and were rejected. No claims are amended herein. Claims 1–4, 6, 9, 24, 26, 29–34, 36, 39, and 40 remain pending. Reconsideration and withdrawal of the rejections are requested in view of the following remarks.

Rejection Under § 102

Claims 1–4, 6, 9, 24, 26, 29–34, 36, 39, and 40 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent 6,360,017 to Chiu et al. ("Chiu"). Claims 1–4, 6, 9, 24, 26, 29–34, 36, 39, and 40 are directed to methods of adapting a coding threshold in image encoders and decoders. The following remarks address independent claim 1. However, each independent claim includes similar limitations and is therefore allowable for at least the same reasons. Similarly, the dependent claims each incorporate such limitations from the corresponding independent claim and are therefore also allowable.

Chiu describes a process for improving the computational efficiency of encoding video. More specifically, Chiu describes a process for enhancing the computation of motion vectors by relying on the levels of detail that can be perceived by a human. Chiu's process may be most readily understood with reference to Fig. 3. In block 304, each raw pixel of an image is compared to a corresponding pixel in a previous image. If the difference between the two pixels is greater than a predetermined first threshold T, a flag is set to a value of 1. If this difference is less than or equal to the threshold T, a flag for the pixel is set to zero.

Thus, block 304 of Fig. 3 of Chiu shows one difference between Chiu and the claims of the present application. Each of the pending claims requires encoding a first image representation and a second image representation and comparing parameters from these two encoded images to determine whether to adapt a coding threshold. As can be clearly seen from Fig. 3 of Chiu, it is unencoded images that are compared, not encoded images as required by each of the pending independent claims.

In block 306 of Chiu, the flag values for each macroblock (comprising a plurality of pixels) are summed. This sum is then compared to a second predetermined threshold n. If the sum exceeds the threshold n, the block is encoded. This encoding includes the computation of

motion vectors by a motion compensation routine. If the sum is less than or equal to this second threshold n, the block is not encoded.

Thus, block 306 of Fig. 3 of Chiu shows another difference between Chiu and some claims of the present invention. Because Chiu acts on unencoded macroblocks, there are no motion vectors until after all of the comparisons to various thresholds have been made. Conversely, claims 3 and 4, for example, require that motion vectors of the encoded blocks be compared to determine whether the blocks are stationary. All of the comparisons in Chiu take place before motion vectors are determined, and so at least claims 3 and 4 as well as the other claims including similar limitations cannot be anticipated by Chiu.

This leads to yet another distinction between Chiu and the claims of the present application. Claim 1 recites comparing parameters of the first and second encoded blocks to determine whether to adjust a coding threshold. The coding threshold is adjusted if the blocks are determined to be stationary. Chiu discloses two different thresholds in the encoding process, but neither of these thresholds is described as being adjusted depending on a determination of whether or not the block is stationary. Chiu therefore does not teach adjusting the coding threshold if the image is stationary as recited in claim 1 (and the other independent claims).

The Office Action cites Chiu at col. 8, ll. 40–55 as providing the recited teaching of adapting a threshold for a stationary block. However, this passage does not describe the recited limitation. First, the passage describes a pixel-by-pixel comparison of unencoded images, not a comparison of encoding parameters from encoded images as recited in the claims. Second, nothing in this passage describes anything about changing the threshold, whether based on motion of the image or not.

Because Chiu fails to teach or suggest each limitation of the pending claims, the rejection of these claims as anticipated by Chiu is improper. Withdrawal of the rejections and a Notice of Allowance for all pending claims is therefore requested. If the Examiner has questions or comments that would aid in advancing the case to allowance, he is invited to contact the undersigned by telephone at his convenience.

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Respectfully submitted,

August 20, 2007　　　　　　　　　　**/Billy C. Allen III/**
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